

In re Patent Application of
BUSSON ET AL.
Serial No. 09/827,306
Filed: **APRIL 5, 2001**

REMARKS

Applicants appreciate the Examiner's careful and thorough examination of the present application, and for correctly withdrawing the previous rejection in view of Applicants' response. As noted above, the Examiner agreed to withdraw the premature finality of the previous Office Action during the telephone interview on January 20, 2006. Claims 11-57 remain pending in the application. Favorable reconsideration is respectfully requested.

I. The Invention

As shown in FIGS. 1 and 2, for example, the invention is directed to a process for controlling a tuner that can be integrated on a silicon substrate, while avoiding saturation of the various elements of the tuner. The tuner includes an analog block, a digital block, and an analog/digital conversion stage connected therebetween. The analog block includes a first attenuator/controlled-gain amplifier stage connected upstream to a frequency transposition stage. The overall mean power of the entire signal received by the tuner is calculated during initialization. This overall calculated power is compared in the digital block with a first reference value corresponding to a power desired at a location of the analog block. The gain of the first attenuator/amplifier stage is adjusted such as to minimize the deviation between the overall calculated power and the reference value. In normal operation, one of the channels of the signal received is selected, with the gain of the first attenuator/amplifier stage being fixed.

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II. The Claims are Patentable

Claims 11-57 were rejected in view of Ciccarelli et al. (U.S. Patent No. 6,498,926) in view of Gilhousen et al. (U.S. Patent No. 5,485,486) for the reasons set forth on pages 2-10 of the Office Action. Applicants contend that Claims 11-57 clearly define over the cited references, and in view of the following remarks, favorable reconsideration of the rejection under 35 U.S.C. §103 is requested.

Independent Claim 1 at least includes comparing the calculated overall power in the digital circuit with a first reference value corresponding to a desired power at a location in the analog circuit, and adjusting a gain of the first controlled-gain amplifier stage based upon a deviation between the calculated overall power and the first reference value. Similarly, independent Claim 22 includes adjusting a gain of the first controlled-gain amplifier stage based upon a deviation between the calculated overall power and a first reference value corresponding to a desired power at a location in the analog circuit.

Also, independent Claims 33 and 46 at least include a digital circuit connected to the analog/digital conversion stage and comprising a first adjustment circuit for adjusting a gain of the first controlled-gain amplifier stage based upon comparing a calculated overall power of the entire signal with a first reference value corresponding to a desired power at a location in the analog circuit.

It is these combinations of features which are not fairly taught or suggested in the cited reference and which patentably define over the cited references.

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The Ciccarelli et al. patent is directed to a programmable linear receiver which provides the required level of system performance at reduced power consumption. The receiver minimizes power consumption based on measurement of the non-linearity in the output signal from the receiver. The amount of non-linearity can be measured by the received-signal-strength-indicator (RSSI) slope or energy-per-chip-to-noise-ratio (E_c/I_o) measurement. The RSSI slope is the ratio of the change in the output signal plus intermodulation to the change in the input signal. The input signal is periodically increased by a predetermined level and the output signal from the receiver is measured.

The Gilhousen et al. patent is directed to a power control system for a CDMA cellular mobile telephone system. Cell-site transmitted signal power is measured as received at the mobile unit. Transmitter power is adjusted at the mobile unit in an opposite manner with respect to increases and decreases in received signal power. A power control feedback scheme may also be utilized. At the cell-site communicating with the mobile unit, the mobile unit transmitted power is measured as received at the cell-site. A command signal is generated at the cell-site and transmitted to the mobile unit for further adjusting mobile unit transmitter power corresponding to deviations in the cell site received signal power. The feedback scheme is used to further adjust the mobile unit transmitter power so that mobile unit transmitted signals arrive at the cell-site at a desired power level. In a cell diversity situation, the mobile units transmitter power is adjusted to prevent unnecessary increases in mobile unit transmitter power level.

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In the Office Action, the Examiner specifically relied upon AGC detector circuit 96, comparator 98 and filter 100 in the Gilhousen et al. reference which estimate received mobile unit signal power and the power correction necessary for the mobile unit transmitter. This correction is used to maintain a desired transmitter power level in conditions of fading on the outbound channel that are common to the inbound channel. It is the Examiner's position that it would have been obvious to modify the device of the Ciccarelli et al. patent with this teaching in Gilhousen et al. to somehow arrive at the claimed invention.

However, it is clear that the Examiner has used impermissible hindsight reasoning to combine disjoint pieces of prior art while using the present invention as a roadmap to make such combination. Indeed, neither of the references teaches that the gain of a first attenuator/amplifier stage, connected upstream to a frequency transposition stage in an analog block of a tuner, is adjusted such as to minimize the deviation between the overall calculated power and the reference value, as claimed.

As the Examiner is aware, to establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim features. The initial burden is on the Examiner to provide some suggestion of the desirability of doing what the Applicants have done. To support the conclusion that the

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claimed invention is directed to obvious subject matter, either the reference must expressly or impliedly suggest the claimed invention or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the reference. Both the suggestion to make the claimed combination and the reasonable expectation of success must be founded in the prior art and not in Applicants' disclosure.

There is simply no teaching or suggestion in the cited references to provide the combination of features as claimed. Accordingly, for at least the reasons given above, Applicants maintain that the cited references do not disclose or fairly suggest the invention as set forth in Claims 11, 22, 33 and 46. Thus, the rejection under 35 U.S.C. §103(a) should be withdrawn.

It is submitted that the independent claims are patentable over the prior art. In view of the patentability of the independent claims, it is submitted that their dependent claims, which recite yet further distinguishing features are also patentable over the cited references for at least the reasons set forth above. Accordingly, these dependent claims require no further discussion herein.

III. Conclusion

In view of the foregoing remarks, it is respectfully submitted that the present application is in condition for allowance. An early notice thereof is earnestly solicited. If, after reviewing this Response, there are any remaining

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informalities which need to be resolved before the application can be passed to issue, the Examiner is invited and respectfully requested to contact the undersigned by telephone in order to resolve such informalities.

Respectfully submitted,



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CERTIFICATE OF FACSIMILE TRANSMISSION

I HEREBY CERTIFY that the foregoing correspondence has been forwarded via facsimile number 571-273-8300 to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 this 11th day of April, 2006.

